INSTITUTE FOR DEFENSE ANALYSES

Award Fee Study Group Report

Scot A. Arnold, Project Leader

With Contributions by:
Deborah P. Christie
Richard P. Diehl
Frank Kendall
David L. McNicol
Gene H. Porter
Robert R. Soule

January 2008

Approved for public release;
distribution unlimited.

IDA Paper P-4296

Log: H 07-001689

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE **01 JAN 2008**	2. REPORT TYPE **N/A**	3. DATES COVERED
4. TITLE AND SUBTITLE **Award Fee Study Group Report**		5a. CONTRACT NUMBER
		5b. GRANT NUMBER
		5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)		5d. PROJECT NUMBER
		5e. TASK NUMBER
		5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Institute for Defense Analyses 4850 Mark Center Drive Alexandria, VA 22311-1882**		8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited.

13. SUPPLEMENTARY NOTES
The original document contains color images.

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**UU**	**56**	

This work was conducted under contract DASW01-04-C-0003, Task AH-7-2774, for the Office of the Deputy Under Secretary of Defense (Industrial Policy). The publication of this IDA document does not indicate endorsement by the Department of Defense, nor should the contents be construed as reflecting the official position of that Agency.

INSTITUTE FOR DEFENSE ANALYSES

IDA Paper P-4296

Award Fee Study Group Report

Scot A. Arnold, Project Leader

With Contributions by:
Deborah P. Christie
Richard P. Diehl
Frank Kendall
David L. McNicol
Gene H. Porter
Robert R. Soule

PREFACE

The Institute for Defense Analyses (IDA) prepared this paper for the Deputy Under Secretary of Defense (Industrial Policy) under a task titled "Profit Policy Research." The task objective is to evaluate the degree to which the Office of the Secretary of Defense's profit policy affects both performance on defense contracts and the finances of the contracting firms.

Thomas P. Frazier and Stanley A. Horowitz of IDA were the technical reviewers for this paper.

TABLE OF CONTENTS

Outline 1
Background 2
Definition of Alternatives 7
Evaluation Framework 20
Evaluation 24
Conclusions 36
Award Study Group Members 41
Abbreviations A-1

Institute for Defense Analyses
4850 Mark Center Drive • Alexandria, Virginia 22311-1882

AWARD FEE STUDY GROUP REPORT

August 2007

1

Outline

- Background
- Definition of Alternatives
- Evaluation Framework
- Evaluation
- Conclusion
- Award Study Group Members

2

BACKGROUND

2

Statutory Language

House Report 109-702 Sec. 814

(c) Assessment of Independent Evaluation Mechanisms

(1) IN GENERAL—The Secretary of Defense shall select a federally funded research and development center to assess *various mechanisms* that could be used to ensure an *independent evaluation of contractor performance* for the purpose of *making determinations* applicable to the *judging and payment* of award fees.

(2) CONSIDERATIONS—The assessment conducted pursuant to paragraph (1) shall include consideration of the advantages and disadvantages of a system in which award fees are—

(A) held in a *separate fund or funds* of the Department of Defense; and

(B) allocated to a specific program only upon a *determination by an independent board*, charged with comparing contractor performance *across programs*, that such fees have been earned by the contractor for such program. *[Emphasis added]*

4

Motivation – 12/2005 Government Accountability Office (GAO) Findings

1. Award-fee criteria and the resulting awards should be more accountable to actual outcomes
2. Awards should be paid only for above-satisfactory performance
3. Official compliance review of award process is needed
4. Better guidance on the appropriate use of "roll-overs" is needed
5. Department of Defense (DoD) needs to capture award and incentive-fee data
6. DoD needs to develop performance measures to better manage the effectiveness of award and incentive-fee contracts
7. There should be a DoD-wide method to share acquisition incentive strategies.

5

The GAO report had seven key findings.[1] DoD concurred with findings 1, 4, and 7 and partially concurred with the remaining four findings. DoD first issued a memorandum in March 2006 outlining its plan to address the GAO findings[2], and then in April 2007 outlined new guidance on awards.[3] In the 2007 memorandum, the DoD:

- Defined performance and payment guidelines,
- Mandated the use of more objective criteria,
- Mandated that rollovers be used on an exceptional basis, and

---

1 GAO, "Defense Acquisitions: DoD Has Paid Billions in Award and Incentive Fees Regardless of Acquisition Outcomes," GAO-06-66, December 2005.

2 James I. Finley, Deputy Under Secretary of Defense (Acquisition, Technology and Logistics), Memorandum for Secretaries of the Military Departments and Directors of the Defense Agencies, Subject: Award Fee Contracts (FAR 16, DFARS 215, DFARS 216), March 29, 2006.

3 Shay D. Assad, Director, Defense Procurement and Acquisition Policy, Memorandum for Secretaries of the Military Departments and Directors of the Defense Agencies, Subject: Proper Use of Award Fee Contracts and Award Fee Provisions, April 24, 2007.

- Dictated the Head of Contracting Activity must sign a determination and finding to use a cost plus award fee contract.

The policy's implicit goal is to reduce the number of award contracts where possible and move toward more objectively structured cost plus award fee (CPAF) contracts. Note that DoD did not agree that the base fee, restricted in Defense Federal Acquisition Regulation Supplement (DFARS) 216.405-2(c)(iii) to 3 percent, was sufficient for satisfactory performance (GAO finding 2). The DoD seeks to provide contractors with an adequate fee for satisfactory performance. The Department should expect that the average contract will not exceed satisfactory results but these contracts should still provide the contractors a reasonable return, which would exceed the maximum base fee of 3 percent.

The GAO report states that neither award nor incentive fee contracts appear to have motivated improved cost and schedule performance. However, incentive fees have potentially fared better since they do not "overpay" for the metric on which the fee is based. From its findings, GOA recommended that DoD refine its fee determination methodology; the Congress, however, has gone further and suggested that DoD implement the GAO recommendations and move the authority to determine fees to an independent panel. The implication is that the Congress believes that independent fee determination board would make more objective awards and that the perspective of the program office executing the contract is biased toward the contractor.

FY 2005 Contracts > $225,000

Total DoD Contracts ($ Mils)	Obligation	
Fixed Price	$ 163,092	58%
Fixed Price Incentive	7,100	3%
Cost Plus Incentive	12,259	4%
Fixed Price Award Fee	1,947	1%
Cost Plus Award Fee	**33,135**	**12%**
Cost Plus Reimbursed	39,247	14%
Other*	25,221	9%
Total >$225 Thousand	$ 282,000	

Cost Plus Award Fee Breakdown ($ Mils)	Obligation		Contracts	
$1 Billion or greater	$ 10,016	30%	4	0.2%
$100 million to $1 billion	11,828	36%	45	3%
$10 million to $100 million	8,312	25%	263	15%
$1 million to $10 million	2,701	8%	884	52%
$225 thousand to $1 million	278	1%	502	30%
Grand Total	$ 33,135		1,698	

Source: Federal Procurement Data System (FPDS) availabl at FPDS.gov

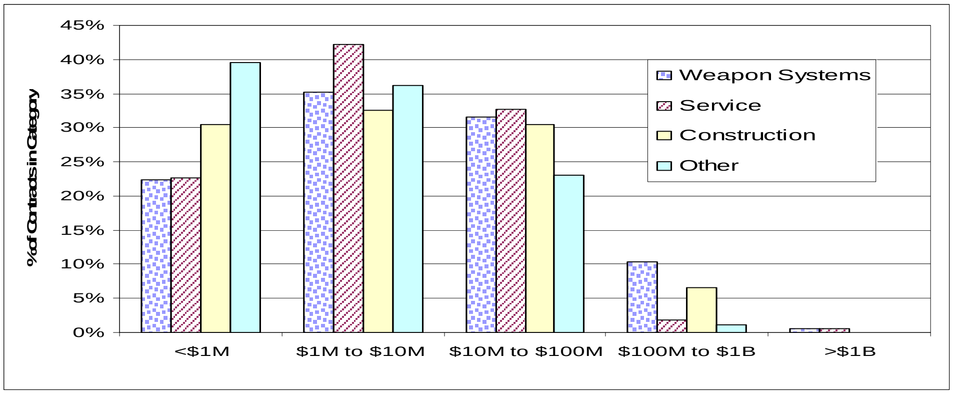
* Includes time and materials, fixed price re-determination, cost sharing, and combination contract type

1

For perspective on the importance of award fee contracts, we looked at the most recent full year, 2005, of contract data in the FPDS and found that for DoD, CPAF contracts are common, though most contracts are fixed price or cost plus. Incentive contracts are used much less frequently than CPAF contracts.

CPAF contracts can be very large, but most of them are under $10 million. Four multi-billion-dollar CPAF contracts account for 30 percent of total CPAF expense, while 18 percent of CPAF contracts account for 91 percent of total CPAF expense.

FY2005 CPAF Breakdown



CPAF by Work Type ($ Bils)

	Obligation	
Weapon Systems	$ 18.6	Aircraft 7.5, Missiles 4, Ships 3, Electronics 3, Vehicles 1
Service	11.3	KBR 3, Boeing 2, seven support contracts 1.5
Construction	1.0	
Other	2.3	
Total CPAF	$ 33.1	

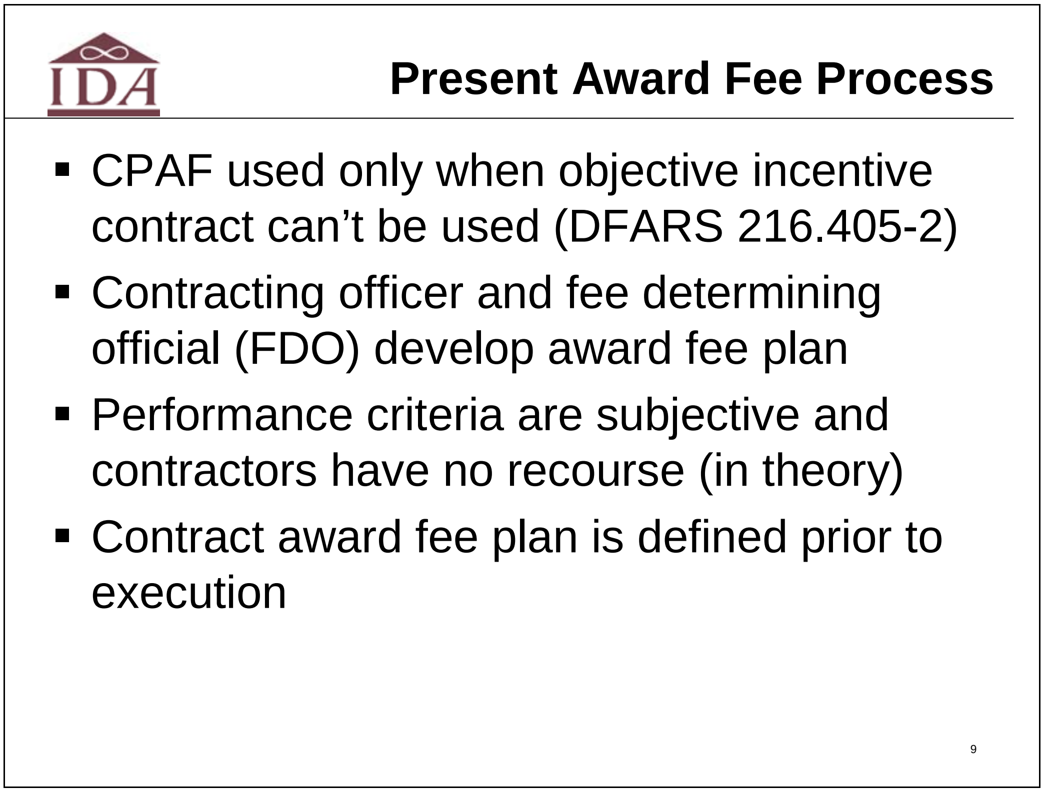
[a]Source FPDS.gov

8

Weapon system development and services contracts dominate CPAF usage on total value. Contractors favor CPAF contracts for development contracts because they believe they have better profit potential. CPAF contracts are used for services that lack clear objective performance metrics.

DEFINITION OF ALTERNATIVES

9



DoD policy for selecting contracts is covered in the DFARS section 16.404 (a), 16.404 (b), and 16.405-2. The policy goal is to match the contract type to the contract performance and business risks associated with the project. Cost reimbursement contracts, such as cost plus fixed fee (CPFF) or CPAF, are preferred when it costs the government less to bear the risk itself than to pay a contractor to bear risk it may not be able to control.

The contracting officer and FDO, usually a senior member of the contracting entity, develop an award fee plan at contract inception. This plan includes part, or all, of the target fee broken out by evaluation period. It will also include some indication of how the contract performance will be evaluated in the context of determining the award fee. The CPAF contract structure is intended for subjective evaluation criteria. If a key criterion of the program is objective, such as the design cost or weight of a system in development, a CPAF contract may not be appropriate; incentive contracts have lower oversight costs and could be more effective.

Contractors are informed of the award fee decision in writing, including the justification for the fee decision. However, the government is not obliged to provide details on the evaluation methodology or to list names of performance monitors.

Present Award Fee Management

- FDO determines performance and fee entitlement based on approved award plan
- Contracting officer must document performance issues that lead to partial fees
- Fee is held by program office
- Leftover fee must be:
  - Returned to Treasury or
  - Allocated and re-obligated to program actions or
  - Rolled to future award pools (common today)
- Fee amount, payment schedule, and criteria are contract specific

9

With the assistance of the Award Fee Review Board (AFRB), the FDO determines the award fee at the appropriate milestones. The award is based on input from performance monitors who maintain routine daily contact with the contractor. The contractor is also encouraged to provide a self assessment.

The FDO and contracting officer must document the rationale behind the fee award. The contractor is informed of the basis for the fee.

The contracting office controls the fee as part of its contract budget. Un-awarded fee budget must be de-obligated unless it has specifically been held in reserve for future award fee considerations. The de-obligated funds can be allocated and re-obligated to other program actions. If the un-awarded fee is held for future award periods it is called "rollover." Through rollover, a contractor has the opportunity to recover a substantial portion of fee it failed to be awarded in prior periods of performance. According to the new DPAP award fee policy, rollover is to be used on an exceptional basis. Un-awarded fee that is not used for other same-program expenses must be returned to the Department of the Treasury.

Presumed Congressional Alternative

- Award fee board and pool
- Independent board evaluates contractor performance and determines award fee
- Award fees are determined by comparing across a set of programs
- Award fee funds are held in pools separate from the program funds

13

The study group presumed the Congress implied an independent board was the alternative to the present award fee process.[4] An independent board would evaluate contractor performance and determine the award fee either individually or by comparing the contractor's performance against other contractors across a set of programs. In the latter case, the board would then pay award fees that are held in pools separate from the program funds. We address each portion of this alternative approach separately.

4 The independent board we refer to hereafter should not be confused with the existing AFRB. We note, however, that aside from independence from the contracting or program office, the two boards share similar roles. Should the alternative independent fee determination board be implemented, the regulatory guidelines on the AFRB could serve as a template with appropriate changes to achieving the desired independence.

Desired Board Qualities

- Independence: the board is independent from the program manager (PM), contractor, and inter-service politics
- Knowledge of the program: the board understands the details of the program, its history, and progress
- Legal status: the board has the authority to make fee determinations
- Focus: the board is dedicated to the fee determination process, and depending on scope, the board positions could be full time with staff support
- Fair: the board augments the PM's influence over the contractor and fairly rewards deserving contractor performance

9

The purpose of the board is to reduce the inclination toward awarding contractors higher fees than they deserve. The key board attribute in achieving its purpose is its independence from the program manager (PM), the contractor, and inter-service politics. The board members must understand the details of the programs being evaluated, including each program's history and progress. These are conflicting demands that reduce the population of potential members.

The board has to have the appropriate legal status granting it authority to make fee determinations. Presently only the program has this authority.

Given that there are about 50 major award fee contracts per year, the board may need to be dedicated to the fee determination process on a full-time basis and supported by sufficient staff. This requirement probably would prevent senior DoD acquisition officials from serving on the board. Even if the scope of a fee determination board was limited to a sub-grouping of the major award fee contracts, the workload would be too great to add to the existing acquisition management's direct responsibility.

Board Composition and Activities

- Board members could be from:
  - Defense Acquisition Executive (DAE) level
  - Service Acquisition Executive (SAE) level
  - Program Executive Office (PEO)
  - Outside DoD: federally funded research and development centers (FFRDCs), consultants, or specially appointed new hires
- Other staff for analyses and administrative tasks
- Gets input from DAE, SAE, PEO, PM, contractor
- Decides with votes or board chair has authority
- The board compares and force ranks contractors across programs based on performance
- The scope of inter-program ranking determines the level of the board and the size of the pool

9

Board members could come from a variety of sources including the DAE level, SAE level, PAE level, or outside sources, such as consultants or an FFRDC. Although as previously stated, it would be unlikely that executives would be capable of both performing their existing jobs and fulfilling the requirements of the fee board.

The board should expect to receive input on its fee determination decisions from the DAE, SAE, PEO, PM, and contractors on the programs included in its portfolio and will need staff to analyze this input and perform other administrative tasks. The board could make decisions either by vote, or members could advise a board chairperson who has ultimate authority.

If the board compares contractors across programs, the staff will have to perform additional analysis and document its application of the appropriate forced ranking methodology for each group of contractors being evaluated. This practice will also determine the composition of the board members and how deep the analysis will look into the program details. The scope of the programs and number of contractors will also be a factor guiding the potential size of the award fee pool.

Ranking Programs

- Presently, fee determination reviews are driven by the schedule in each contract, which can be calendar or event driven
- Comparing across programs requires flexibility to schedule fee determination for multiple programs simultaneously
  - Negative cash flow effects could be reduced with retroactive adjustments
  - Additional analysis required to develop ranking methodology for each contractor group
  - Ranking methodology must be consistent while flexible enough to handle wide scope of contractors and programs in the fee determination pool
  - “Excellent” on Program “A” must be the same as “excellent” on Program “Q”

9

Ranking across programs would require some consideration of the different program milestone schedules in order to determine fees for multiple programs simultaneously. Currently, fee determinations are driven by the schedule (calendar date or milestone event) of each individual contract.

The ranking protocol must be consistent and fair while flexible enough to handle a wide scope of contractors and programs in the fee determination pool. If the board works with a highly heterogeneous program portfolio, it will almost necessarily lack sufficient knowledge to judge and rank programs based on its own in-depth analyses. Rather, it will rely on performance appraisals from the program as well as input, whether requested or not, from the contractor. For this consideration to be fair, it will be critical that the appraisal process and documentation be extraordinarily consistent and rigorous. Ratings must be normalized such that an “excellent” rating on Program “A” must be the same as an “excellent” rating on Program “Q”.

IDA

Award Fee Pool Option 1

Target Award in Contract

- Anti-deficiency act requires obligating funds to cover government's contingent liabilities before a contract option is signed
  - Potential award fees are specified in each contract
  - The fee pool for multiple contracts must satisfy the total contingent liability
- Funds could be appropriated to the programs and transferred to the pool or appropriated directly to the pool
- The pool manager obligates funds from the pool before a contract option is signed. Once award is approved:
  - Pool manager transfers funds to the program
  - Pays the contractor directly
- Pool funds are fungible (might require legislation)
  - Funds not awarded on one contract could be awarded on another
  - Modification of the second contract would be required
  - Funds remaining after awards could cover contract shortfalls (done today)
- Award schedule:
  - According to individual program events (funds reserved for each program) or,
  - As a group if an inter-program ranking is used

9

We have identified two distinct options for handling the award fee pool.

Option 1, Target Award in Contract—The Anti-Deficiency Act requires appropriating funds to cover the government's contingent liabilities before a contract is signed. This requires that potential award fees be specified in each contract and that the fee pool for multiple contracts must satisfy the total contingent liability. To do this, funds could be appropriated to the programs and transferred or directly appropriated to the pool. The pool manager would then obligate funds from the pool before a covered contract is signed. Once the award is approved, the pool manager transfers funds to the program and the program pays the contractor directly.

Pool funds should be fungible so that un-awarded balances could be transferred between contracts. This may require modification of the receiving contract if an awarded fee is greater than expected. Balances remaining after all awards have been paid should be available to cover contract shortfalls on any of the contracts in the pool. It is likely that new legislation would be required for the pool funds to be fungible. Fungibility should remove the need to spend the money on the award fees or lose it. We are aware that this could be difficult to implement on a recurring basis in practice when the Department and the Congress are under budget pressures.

Scheduling award fee payments could work one of two ways: (1) if the funds are reserved for each program, each contractor could be paid according to individual program events; or (2) if the award fee determination is across programs, all contractors could be paid at the same time. Fee payments can be modified to retroactively compensate contractors whose milestone awards are past due.

Award Fee Pool Option 2

No Award Fee in Contract

- Contracts specify that award fees are available
- Pool size not constrained to contract contingent liabilities
- Pool must be sized to provide the overall desired incentives
- Funds appropriated directly to pool
- Once award is approved:
  - Pool manager obligates funds
  - Transfers funds to program or pays contractor directly
- Pool funds are fungible (might require legislation)
  - Funds not awarded on one contract could be awarded on another
  - Modification of the second contract may be required
  - Funds remaining after awards could cover contract shortfalls (done today)
- Awards would have to be considered as a group to ensure funds are available for all deserving programs

9

Option 2, No Award Fee in Contract—With this option, the contract will specify that award fees are available without a specified amount commitment. The pool is then not constrained to cover specific contract contingent liabilities. Rather, the pool must be sized to provide for incentives to yield the overall desired outcomes. This will require careful consideration and management discipline. Appropriating an inadequate pool could save in the short run while ultimately defeating the incentive effectiveness of the award mechanism.

Funds will be appropriated directly to the pool. Once the award fee is approved, the pool manager obligates the funds and can either transfer the funds to the program or pay the contractor directly. Like Option 1, the fund would need to be fungible, which may require legislation. All awards would have to be considered simultaneously, as a group, to ensure funds are available for all deserving programs. Fee payments would be made simultaneously as well. As in Option 1, the payments can retroactively compensate contractors whose milestone awards are past due.

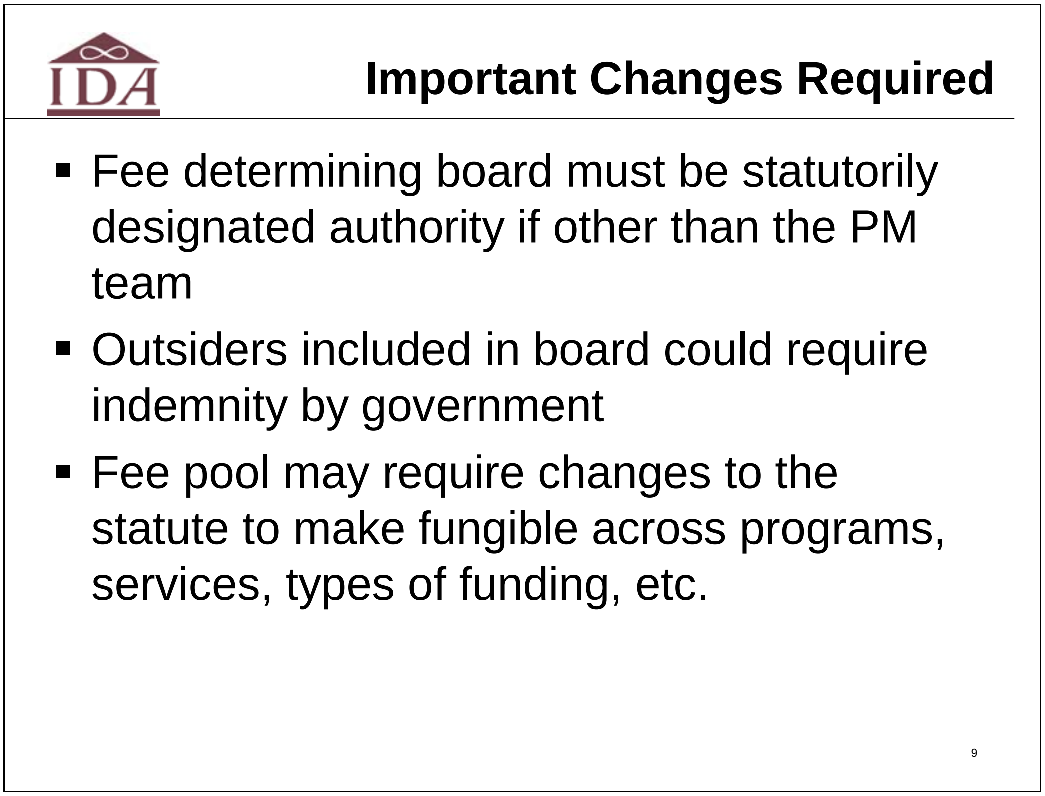
For Both Pool Options

- Award fee pool can be a revolving fund
  - Avoids color-of-money problems for pools serving more than one type of appropriation.
  - Allows time horizon flexibility as the expenditure periods vary among appropriations
- If pool funds build up
  - DoD can ask Congress to transfer “excess” funds to another account in a future budget.
  - Facilitates efficient use of award pool

9

For both options, the award fee pool could take the form of a revolving fund and avoid “color of money” issues by serving more than one type of appropriation. The financial structure also would allow time horizon flexibilities as the program and contract expenditure periods vary among appropriations.

If the pool fund builds up, DoD can ask Congress to transfer “excess” funds to other DoD accounts for future budget. This would facilitate efficient use of the award fee pool regardless of whether Option 1 or 2 is used.



Three issues could need legal changes: (1) the fee determining board must be statutorily designated with the appropriate authority particularly if comprised of personnel outside the acquisition team or program chain of command; (2) non-governmental board members may require indemnity by the government; and (3) the fee pool may require statutory enhancements to allow funds to be fungible across program, services, types of funding, etc.

IDA

EVALUATION FRAMEWORK

9

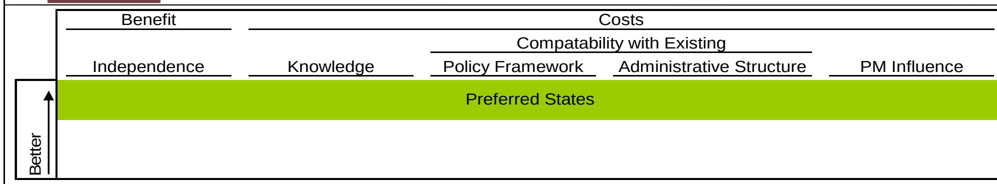
Evaluation Framework

- Where might costs increase (qualitatively)?
  - Legal—Rule or Statute change
  - Changes in management information systems
  - Changes in finance and accounting procedures
  - Recurring cost of additional workload
- What might improve or change?
  - Independence
  - Accountability for contract outcomes
  - Contractor performance
  - Contractor behavior
  - Schedule, cost, and system performance
- Will there be unintended consequences (e.g., new biases)?

The evaluation centered on qualitatively assessing the award fee board and pool concepts using the framework outlined above. The study group considered the relative recurring and non-recurring costs that might accrue as a result of adopting each option. They ranked possibilities on whether an alternative would require changes to a rule or statute; changes in management information systems; chances to finance and accounting procedures; and an increase in the recurring workload. The study group evaluated whether these options would improve: independence of the award fee decision; accountability for contract outcomes; and contractor performance. Also, would anyone be able to observe these behavior changes?

The changes should drive observable improvements in schedule, cost, and system performance. Furthermore the evaluation also tried to anticipate some of the unintended consequences of adopting these options.

Panel Implementation Issues



- Qualitatively rate board composition on five categories
  - Independence—chief benefit of separate fee board
  - Detailed knowledge of the program
  - Ease of implementation in today’s legal and policy framework
  - Ease of implementing board in existing DoD administrative structure
  - PM’s influence and authority over its contractors
- Grid identifies the ideal board composition—not whether board improves CPAF process

9

The study group created a grid to identify the ideal board composition based on five qualitative attributes: (1) independence; (2) detailed knowledge of the program; (3) ease of implementation in existing legal and policy framework; (4) ease of implementing the board in existing DoD administrative structures; and (5) the PM’s influence and authority over its contractors.

Independence, the main attribute of a separate fee board, increases the further away the board is from the influence of the PM. Obvious candidates are executives overseeing the PM and outsiders such as consultants who are unencumbered by the associated contractors and subcontractors. However, acquisition executives above the PM are ultimately exposed to the same performance measure pressures and thus the independence could prove to be superficial.

The DoD administrative structure refers to the ability of existing DoD executives to respond to the detailed needs of the programs. Most DoD executives who are relatively free from the influence of the PM and have the necessary knowledge of programs and of the acquisition process are fully dedicated to demanding existing job responsibilities.

Most members of the study group considered the PM’s influence over the contractors to be the critical link toward getting the desired performance from contracts. The PM is chiefly responsible for the contract performance and should have the authority to motivate the contractor accordingly. Increasing the independence of the award fee determination group reduces the PM’s influence and authority over the contractor.

Finally, it is critical to remind the reader that the study group evaluated the board and pool alternatives and provided a feasible construction. This does not imply that the group believes that the ideal board would improve the CPAF contract structure or award process.

EVALUATION

9

Board Implementation Issues

Benefit	Costs			
		Compatability with Existing		
Independence	Knowledge	Policy/Legal Frame	Administrative Structure	PM Influence
Outsiders	PM Led	PM Led	PM Led	PM Led
DAE Led	Outsiders	PEO Led	Outsiders	Outsiders
SAE Led	PEO Led	SAE Led	PEO Led	PEO Led
PEO Led	SAE Led	DAE Led	SAE Led	SAE Led
PM Led	DAE Led	Outsiders	DAE Led	DAE Led

Better

- Independence: outsiders could be the most independent
- Outsiders could be selected for their ability to quickly understand programs—acquisition executives above the PEO have too wide scope to effectively evaluate the contractor
- Policy/legal hurdles:
  - Outsiders are not legally part of the acquisition process—this would need to be addressed
  - The higher the management level for the fee determination, the more political the fee determination process
- Administrative structure: acquisition executives (besides PM/PEO) are too overloaded to provide the time necessary for award fee determination
- Removing the fee determination to higher management level dilutes PM's authority and influence over the contractor. Outsiders could conceivably determine award fee without completely diluting the PM's power

9

The table in the above chart ranks in descending order the preferred board member options according to the five attributes. Under each attribute the two best board member options are at the top and outlined with the green band.

In the opinion of most of the study group members, the fee determination board's knowledge of the program and influence over the contractor are far more important that the other three attributes. Program knowledge and contractor influence are the main mechanisms for motivating the contractor, and the program team has the natural advantage with these attributes.

IDA

Independent Board

- Independent board reviews contractor performance and board chair makes award fee determination
  - Could be an outsider, PEO, SAE, or DAE
  - To be effective under all metrics, the board would need to be outsiders dedicated to the fee determination task
- Under current law, board chair would have to be in the acquisition chain of the program under review (i.e., PEO, SAE, or DAE) to make the determination

9

Technically the board could be composed of members whose other job is the PM, PEO, SAE, or DAE. However, the most independent and least dilutive of PM influence composition would be outsiders who have deep knowledge of the program portfolio and are dedicated full time to the fee determination task.

Most of the study group felt that the most effective board structure would have most board members as advisors to a board chairperson who makes the ultimate fee determination. A less favorable alternative would be to have the board decision based on majority voting. The board chair would have to be in the acquisition chain of the program under review to make the determination. Presently this would include only the PM, PEO, SAE, or DAE. Having an outsider as a board chairperson would require changes to the present statute.

Cross Program Fee Determination

- The group should be three or more programs.
  - One program, no change over present process
  - Two programs: one winner, one loser
- Contract size in pool should be homogenous
  - Awards must be on dollar basis (vs. % of base) to keep budget manageable
  - Pools would need to serve homogenous program groupings—large programs would dominate heterogeneous pools
- Type of programs
  - Pools of similar programs allow detailed evaluation
  - Pools of dissimilar programs require aggregate performance evaluations: outstanding, excellent, good,…

9

If contractors compete across programs for their award fee, the group of programs to be evaluated should include three or more programs. Only one program in the group is an oxymoron and is not a change over the present process. With two programs, there will likely be a winner and a loser. While the competition between contractors may lead to discernable performance improvements, it is also likely that contractors will have more visibility into the process and will lobby the fee determination board. This influence pressure may create unintended pressures for fees contrary to contract outcomes, ties (equal payments), or could lead to disputes or even litigation.

Awards should be on absolute fee basis versus percentage of cost or contract price. This will help ensure that the pool is not depleted due to unforeseen cost growth or disparities in the cost basis between contracts. To best manage pools, they should be arranged to serve homogeneous program size groupings. This practice will prevent large programs from dominating the pool funding level.

Programs should also be grouped by type homogeneity to allow for more detailed evaluation. Pools serving dissimilar programs would require top-level, aggregate performance evaluations. Aggregate performance measures would then need to be developed with enough standardized depth that the results could be effectively normalized.

Observations: General

- An independent award fee determination board and fee pool can be implemented
  - A board outside the acquisition chain could not make fee determinations without changes in law
  - The independent fee pool only helps with cross-program comparative fee determinations
- Pool Option 1 would discourage CPAF contracts
- There is no evidence a board can effectively evaluate subjective contractor performance
  - Objective measures largely absent for CPAF contracts
  - Board is not familiar with details and subject to biases
    - Program team has detailed knowledge and accountability
    - Board must rely on reports from contractors or PM
- April 2007 DoD CPAF policy changes add significant controls to award fee management

9

In general it would be possible to construct an independent fee determination board and pool. The present law would need changes for the board to have members outside the acquisition chain make fee determinations. The independent fee pool offers budgetary flexibility only for cross-program comparative fee determinations. To be effective, the pool would also require changes to the acquisition laws.

Both pool options would discourage CPAF contracts. Option 1 would be particularly odious to the PM since it requires they relinquish budget authority to the separate pool. Option 2 may be viewed in two ways, depending on how it is implemented. If base fees are negotiated higher, some contractors may view the fee pool as an attractive alternative for higher gains. Other contractors may view the process as having greater uncertainty for the same award with limited or no improvement on the upside.

The concept of comparing contractors across programs resembles the forced ranking in personnel performance and merit planning and assessment. Forced ranking makes managers clearly evaluate employee performance and rank it relative to others in the appropriate pool of the organization—someone must be at the top and someone must be at the bottom.[5] High performers are paid more at the expense of lower performers. The process includes clearly articulating employee objectives as well as the criteria for success.

The process has onerous workload requirements and is generally viewed to be unpleasant; however, there is evidence that it can improve the performance of organizations mainly because it creates the opportunity for poor performers to be identified and replaced with higher performing workers. Presumably the process also leads to stronger linkages between performance and pay, though this is not simply due to forced ranking. How the organization differentiates pay based on rank is another critical process altogether. While this method of personnel performance management is used and may have benefits, we are not aware of evidence that would allow us to extrapolate the effectiveness of the process in determining award fees.

Furthermore there is no reason to believe an independent board can evaluate subjective contractor performance more effectively than the program team. CPAF contracts are used because objective measures are largely absent from the specific acquisition. Thus it is likely that the board, which will not be familiar with the program details, will be subject to competing biases inherent in reports from contractors and program managers. When it comes to making subjective assessments, only the program team has sufficient detailed knowledge and accountability.

Also recall that most of the criticism in the GAO report centered on how well the fee determination process was executed. Without the necessary improvements in the process, it seems unlikely that replacing the present fee determination board with a new independent board will improve the situation.

Concurrent with the study group's assessment, the Defense Procurement and Acquisition Policy (DPAP) directorate issued policy changes concerning the use and administration of CPAF contracts.[6] While the study group did not study the overall effectiveness of CPAF contracts, these policy changes appear to add significant controls to award fee management while maintaining the present level of program management influence over the contractor. Furthermore, they appear to address the majority of the

---

5 Dick Grote, *Forced Ranking: Making Performance Management Work* (Excerpted from *Forced Ranking: Making Performance Management Work)*, Harvard Business School Press, 2005

6 Shay D. Assad memorandum, op. cit., April 24, 2007.

GAO concerns.[7] The study group found that these policy changes should be given enough time to have an effect on the CPAF process before further changes are made.

7 However, the guidelines do not limit fee to contract performance that is better than satisfactory. Satisfactory performance can yield up to 50 percent of the award fee. Note that under the present statutory structure the independent fee determination board would need to follow the regulatory guidelines award fee contracts.

Observations: Contractor Issues

- Contractors prefer CPAF contracts over CPFF or incentives
- Award fees are good for business
  - Not constrained by weighted guidelines
  - Improve profits in present limited procurement environment
  - Lower risk than incentives—satisfactory performance gets a significant fraction of the award
  - With prior roll-over practice contractors got fee sooner or later
- What is the effect of the independent board/pool?
  - Good: a chance to earn greater award (Fee Option1)
  - Bad: fee timing and amount uncertainty reduce value of contract
- Contractors may seek greater return in other aspects of the contract—e.g., higher bids or new “gaming” approach

9

It is also important to realize how contractors view CPAF contracts and how they might view the addition of a fee determination board. We found from discussions with several contractors that they prefer CPAF to CPFF contracts. With the trend away from large production programs, contractors expect to perform more development work, and they feel that CPAF contracts are the only way this type of work can achieve acceptable returns.

CPAF contracts also appear to offer lower risk to contractors. Even with the new policy change from DPAP, CPAF contracts receive a significant amount of the award with satisfactory performance. Performance on an incentive contract is factored through the metric which may also reflect luck or factors the contractor was unable to control. Prior to DPAP’s policy changes, the extensive use of rollovers meant contractors eventually received much of the fee. The recent policy change seeks to dramatically reduce the usage of rollover.

If the independent fee determining board and pool are implemented, contractors would assuredly change their contracting strategy. Several possible alternatives include the following: contractors seeking higher fees through improved performance (the government's desired outcome); contractors seeking higher fees through influence of the new fee determination board; contractors focusing on only achieving satisfactory performance since higher achievement has less certain payoff; contractors seeking greater return in other aspects of the contract (e.g., higher bids or base fee); and contractors resisting award fee contracts altogether.

Observations: Program Issues

- Award fee is key PM tool to manage areas without quantifiable metrics
- The good: in some cases, board could arbitrate between PM and poor-performing contractor
- The bad:
  - Less PM award control may reduce CPAF use—PM will not risk losing program funds to independent board and possible reprogramming
  - Will add significant workload to PM and finance
  - Relationship between fee determining board and contractor may subvert PM
  - PM could end up contractor's advocate

9

The CPAF contract and associated process is a key tool the PM uses to manage acquisitions lacking clear quantifiable metrics. There are many development and service contracts like this where the quality of the output is either too costly or impossible to objectively measure. The CPAF contract fills the gap between the CPFF and the cost plus incentive fee (CPIF) contract.

Should the independent fee determination board be implemented, there might be some cases in which the board can arbitrate between the PM and a poor-performing contractor. However, for the most part, the program would be negatively affected by the change. If the PM perceives that his influence will be significantly reduced under the CPAF structure, he may opt for CPFF contracts. Simply the threat of being forced to relinquish funding to the independent fee pool may keep programs from using CPAF contracts.

The independent board and pool add a layer of bureaucracy to the process that will necessarily add workload demands on the PM and program finance director. If this additional work does not justify additional program staff budgets, it will shift program attention and resources away from other tasks.

The new relationship between the fee determining board and the contractor may subvert the PM and ultimately reduce his influence over the contractor. Alternatively, with the contractor competing against other program contractors for its fee, the PM could end up its advocate. Ultimately all of the negative costs and effects could push the program away from CPAF contracts. If this is the goal of using the proposed CPAF structure, it would be less costly and disruptive to simply revoke the use of the contract structure through a regulatory change.

CONCLUSIONS

9

Study Group Findings 1

The group sees no benefit to an independent board over the present process

- Independent boards and fee pools are possible, but
  - Recent DoD CPAF policy changes may accomplish desired reform
  - Any additional leverage over the contractor with the board is more than offset by limiting the PM's control over the award fee
  - Creates an unpredictable disequilibrium if contractor shifts focus from PM to fee board
  - Board is not likely to have the necessary understanding and knowledge to effectively evaluate the contractors' performance

9

There does not appear to be any net benefit to an independent board over the present process. The study group outlines a feasible plan for implementing an independent fee determination board and pool; however, it does not see that the plan would provide any improvement over the present process administered by the program management office. The recent change to the CPAF policy should be given time to affect the outcomes of these contracts.

Subverting or marginalizing the PM's influence over the contractor could be detrimental to achieving desired contract outcomes. While the fee board may have some additional leverage over the contractor, it comes at great risk of limiting the control of the PM who is ultimately accountable for the program performance.

This change creates disequilibrium with unpredictable and unforeseeable outcomes except that the contractor will shift some focus from satisfying the PM to influencing the fee board. The information asymmetry among the parties will keep the board susceptible to the competing influences of the contractor and PM.

Study Group Findings 2

Reducing the PM’s role in award fee determination contradicts PM’s accountability

- Degrades lever motivating subjective areas of contractor performance
- Potentially eliminates the need for and potential utility of CPAF contracts
- What about fee determination advisory board?
  - Board advises PM on fee, not in acquisition chain
  - Pluses: no statutory changes or separate fee pools
  - Minus: same level of effort as fee determination board
  - May be little difference between advisory and full authority boards; PM will not be able to contradict either

9

The study group found that reducing the PM’s role in award fee determination contradicts the PM’s accountability. Using CPAF contracts implies that performance quality is subjective and program management is in the best position to judge subjective quality since it is ultimately accountable for the overall performance of the program. The CPAF contract is intended by design to provide an incentive lever to the program to motivate contractors to strive for outstanding results. Revoking program management’s control over fee determination makes the CPAF contract a much less potent performance lever.

With diminished potency, programs may opt for CPFF contracts. CPAF contracts require more administrative effort than CPFF contracts even before the addition of independent boards and fee pools. Of course, the new DoD policy on award fees is intended to shift the mix from CPAF contracts toward more incentive fee contracts.

The study group assessed whether the fee determination board could act only in an advisory role to the PM. In that case, the board would merely recommend, without any decision authority, a contractor fee to the PM. The fee assessment would not be based on comparisons across programs, although the board could use independent means to develop its findings. There would be no need for statutory changes or separate fee pools. However, it is likely that the same level of effort would be required. Ultimately it is not clear whether such an advisory board would be any less onerous on the PM's control than a fee determination board. One study group member felt strongly that the PM would be inclined to deviate from the advisory board's findings.

IDA

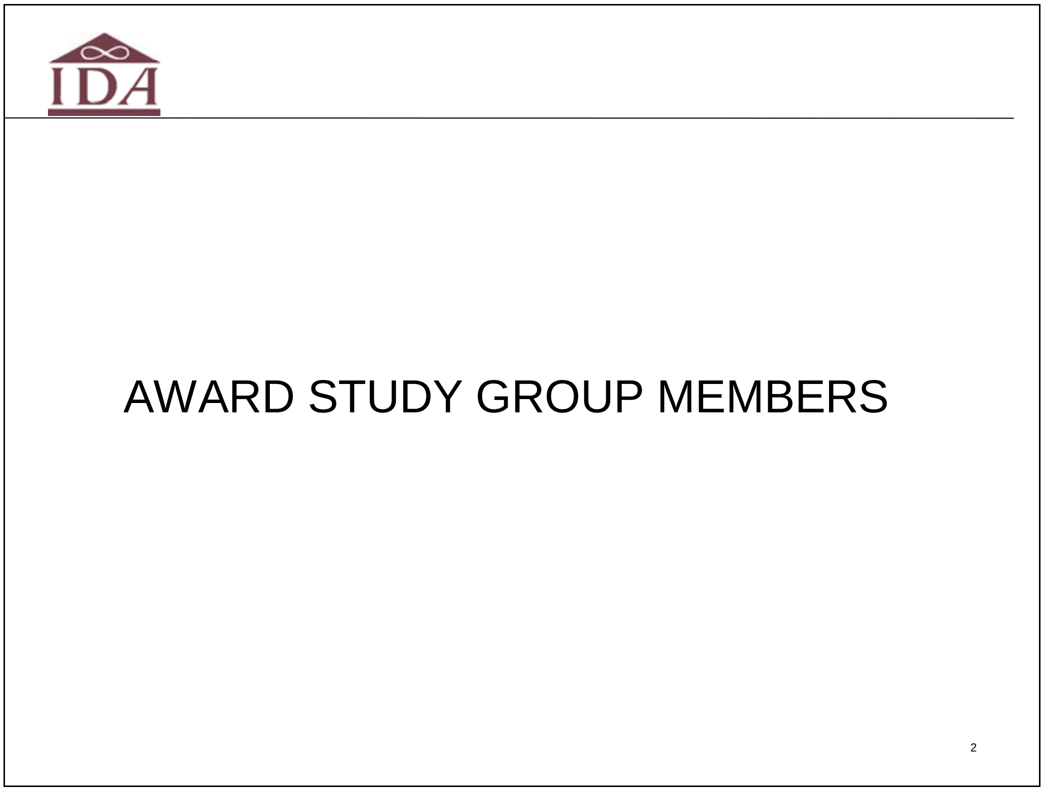
Study Group Findings 3

- The group findings apply to major programs (not services)
  - Applies to most of the recent CPAF expenditures, though small number of contracts
  - Did not consider board overseeing a large number of smaller programs
- Overall effects of an independent board
  - Few benefits expected by diluting the PM’s influence
  - Costs are higher: hiring board members, board administration, program analysis, changes to the business systems, and potential legal changes
  - The costs are non-scalable, i.e., no efficiency gained by widening board approach to all CPAF contracts
  - High risk of negative unintended consequences

9

Finally, the study group developed its assessment of the fee determination board and pool with the assumption that the contract population was restricted to major programs and not service contracts (e.g., large logistics contracts). This restriction limits the population to relatively few of the CPAF contracts every year; however, these few contracts account for more of the CPAF expense. It is not clear whether the board structure could be scaled to oversea a large number of small contracts.

In summary, the study group found few net benefits and high risk associated with implementing an independent fee determination board and pool. The board and pool offer no benefits that could offset the negative effects of a program management team with diminished control. The cost of administering a CPAF contract would be significantly higher: hiring board members, board administration, program analysis, changes to the business systems, and potential legal changes. We expect that the cost and difficulty of managing the process as the scope increases would rise at an increasing rate—there would be no scale economies. This situation is because the evaluation of the contractor’s performance must be based on program-level information. Lastly, the possibility that unintended consequences could completely negate the intended benefits gives the proposed changes a “speculative” risk rating.



Scot Arnold (Project Leader) worked for the Ford Motor Company first as a research scientist and then in several finance positions of increasing responsibility. In 2000, he helped Ford divest its parts divisions as a manager in the new company's (Visteon Corporation) treasury and then corporate finance departments. In 2002, he joined the research staff of the Cost Analysis and Research Division of IDA. Dr. Arnold received his Ph.D. from the Massachusetts Institute of Technology, his MBA from the University of Michigan's Ross School of Business Administration, and his B.A. from Vassar College.

Deborah Christie held various positions over the course of 25 years in the Office of the Director, Program Analysis and Evaluation (PA&E), ultimately rising to the post of Deputy Assistant Secretary for Theater Assessments and Planning. From 1994 to 1998, she served as Assistant Secretary of the Navy (Financial Management and Comptroller), after which she joined IDA's Strategy, Forces and Resources Division.

Richard Diehl has been a specialist in Federal Procurement law for 25 years, including associated litigation within a variety of Federal courts and administrative hearings, protests, and appeals. Mr. Diehl also has significant defense acquisition management experience. He was the Assistant Program Manager responsible for production and research and development (R&D) of the Bradley Fighting Vehicle (1980–1983), then a $13 billion production and $250 million R&D program. Later, he served as the Army's Project Manager for Medium Tactical Vehicles (1984–1986), a $5.4 billion portfolio. He was a charter member of the Army's acquisition corps and served on two occasions as the chief negotiator forging country-to-country R&D and standardization agreements. Mr. Diehl retired from the Army as a Colonel. He received his J.D. from the University of Detroit, his MBA from Tulane University, and his B.S. in mechanical engineering from the University of Michigan.

Frank Kendall worked both in the public and private sectors of defense prior to joining IDA's Joint Advanced Warfighting Program as a consultant. Positions of note include: Assistant Deputy Under Secretary for Defensive Systems, Director of Tactical Warfare Program, and Vice President of Engineering at Raytheon. He has been a member of the Army Science Board and the Defense Intelligence Advisory Board and served as a Consultant on the Defense Science Board and the Navy Studies Board. Mr. Kendall graduated from West Point, and holds graduate degrees in engineering from California Institute of Technology, business from Long Island University and law from Georgetown University. Mr. Kendall currently consults on defense programs with industry, Government, and various policy organizations and he practices human rights law with various non-profit human rights organizations

David McNicol worked for the Office of the Secretary of Defense (OSD) for over 20 years in various capacities within PA&E. He was the Deputy Director for Resource Analysis and Chairman of the Cost Analysis Improvement Group (CAIG) from 1988 to 2002, since which time he has served as a Senior Fellow, Research Staff Member, and now Director of the Cost Analysis Research Division at IDA. Prior to Dr. McNicol's OSD experience, he held positions within the Departments of Energy and Treasury and the President's Council of Economic Advisors. Dr. McNicol received his B.A. in economics from Harvard University, and both his M.S. in management and Ph.D. in economics and finance from the Massachusetts Institute of Technology.

Gene Porter joined IDA as an adjunct in 1999 following over 30 years of defense experience that included stints with the Navy and DoD and 10 years in the private sector (Sanders/Lockheed Martin). Mr. Porter has served as a Scientific Advisor to the Navy Acquisition Executive, the Director of Acquisition Program Integration (OSD), and the Principal Deputy to the Director of PA&E. Mr. Porter received his M.S. in physical oceanography from the University of Washington and his B.S. from the United States Naval Academy.

Robert Soule worked for the DoD for about 20 years in various capacities within Acquisition, Technology and Logistics (AT&L) and PA&E. He was the Director of PA&E from 1998 to 2001, since which time he has served as the Director of the Operational Evaluation Division at IDA. Mr. Soule received his MPA from the Woodrow Wilson School of Princeton University and his B.A. from Amherst College.

ABBREVIATIONS

AFRB	Award Fee Review Board
AT&L	Acquisition, Technology and Logistics
CAIG	Cost Analysis Improvement Group
CPAF	cost plus award fee
CPFF	cost plus fixed fee
CPIF	cost plus incentive fee
DAE	Defense Acquisition Executive
DFARS	Defense Federal Acquisition Regulation Supplement
DoD	Department of Defense
DPAP	Defense Procurement and Acquisition Policy
FDO	fee determining official
FFRDC	federally funded research and development center
FPDS	Federal Procurement Data System
GAO	Government Accountability Office
IDA	Institute for Defense Analyses
OSD	Office of the Secretary Defense
PA&E	Program Analysis and Evaluation
PEO	Program Executive Officer
PM	program manager
SAE	Service Acquisition Executive

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE *(DD-MM-YYYY)*: 01-2008

2. REPORT TYPE: Final

3. DATES COVERED *(From - To)*: May 2007-Jan 2008

4. TITLE AND SUBTITLE
Award Fee Study Group Report

5a. CONTRACT NUMBER: DASW01-04-C-0003

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

5d. PROJECT NUMBER

5e. TASK NUMBER: AH-7-2774

5f. WORK UNIT NUMBER

6. AUTHOR(S), Last Names First
Arnold, Scot A.
Christie, Deborah P.
Diehl, Richard P.
Kendall, Frank
McNicol, David L.
Porter, Gene H.
Soule, Robert R.

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Institute for Defense Analyses
4850 Mark Center Drive
Alexandria, VA 22311-1882

8. PERFORMING ORGANIZATION REPORT NUMBER
P-4296

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Deputy Under Secretary of Defense (Industrial Policy)
241 18th Street
Crystal Square 4, Suite 501
Arlington, VA 22202

10. SPONSOR/MONITOR'S ACRONYM(S)
DUSD(IP)

11. SPONSORING/MONITORING AGENCY REPORT NUMBER

12. DISTRIBUTION AVAILABILITY STATEMENT
Approved for public release; distribution unlimited.

13. SUPPLEMENTARY NOTES
This paper was erroneously issued as a Draft Final under the number P-4276. The correct report number is P-4296.

14. ABSTRACT
Section 814(c) of the National Defense Authorization Act (NDAA) for Fiscal Year 2007 required a federally funded research and development center (FFRDC) to assess mechanisms that could ensure an independent evaluation of contractor performance supporting award fee determinations. Specifically, the FFRDC was to assess the advantages of (1) using separate award fee pools controlled by the independent fee determination board and (2) allowing contractor assessments across programs in contrast to their being made solely on the basis of the contractor's performance against the criteria set in the award fee plan. IDA performed the assessment with a study group composed of veteran senior defense acquisition officials. The study group developed a tailored alternative scenario it believed was feasible and satisfied the requirements in the NDAA. Compared to the present award fee process, the proposed change would offer little net benefit at great risk of diluting program management's influence over the contractor's behavior, which would erode rather than improve the effectiveness of the award fee process.

15. SUBJECT TERMS
Defense Contracting; Defense Contractors; Contractor Fees; Contractor Performance; Fee Determination; Independent Assessment

16. SECURITY CLASSIFICATION OF: a. REPORT	b. ABSTRACT	c. THIS PAGE	17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON (Last Name First)
Unclassified	Unclassified	Unclassified	Same as Report	52	Vehmeier, Dawn

19b. TELEPONE NUMBER (*Include area code*): 703-602-4322